



DOCKET NO: 249786US2S DIV

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
HIDEO ANDO, ET AL. : EXAMINER: NGUYEN, H. T.  
SERIAL NO: 10/802,004 :  
FILED: MARCH 17, 2004 : GROUP ART UNIT: 2621  
FOR: INFORMATION STORAGE :  
MEDIUM AND INFORMATION  
RECORDING/PLAYBACK SYSTEM

APPEAL BRIEF

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicants appeal the outstanding Final Rejection of January 25, 2007, finally  
rejecting Claims 14-17.

I. REAL PARTY IN INTEREST

The above-noted application is assigned to Kabushiki Kaisha Toshiba., which is the  
real party in interest, having a place of business at Kanagwa-Ken, Japan.

II. RELATED APPEALS AND INTERFERENCES

Applicants and Applicants' representative are not aware of any related appeals or  
interferences that will directly effect or be directly affected by or having a bearing on the  
Board's decision in the pending appeal.

10/10/2007 MAHRED1 00000006 10002004  
02-FC:1232 460.00 0P  
10/10/2007 MAHRED1 00000006 10002004  
01 FC:1402 510.00 0P

### III. STATUS OF CLAIMS

Claims 14-17 are pending in this application and the rejection of each of Claims 14-17 is being appealed.

### IV. STATUS OF AMENDMENTS

An Amendment was filed on April 25, 2007, in response to the final Rejection mailed January 25, 2007. This amendment was not entered.

### V. SUMMARY OF CLAIMED SUBJECT MATTER<sup>1</sup>

Claim 14 is directed toward an information storage configured to include control information and video object data. Claim 14 is generally supported by Figure 1 (a view explaining the structure of a recordable/reproducible optical disc, and the correspondence between data recorded on the disc<sup>2</sup>).

Claim 14 recites,

An information storage medium (Fig. 1, recordable/reproducible optical disc 10) configured to have data recorded thereon and data reproduced therefrom by an information recording/reproducing apparatus (Figs. 15, 21, and 27) said data including control information (DA21 in Fig. 4; RTR\_VMG in Fig. 30) and video object data (DA22 in Fig. 4, page 34, line 15 to page 36, line 3), the information storage medium comprising:

a data area (data recording area 28 in Fig. 1, data area DA in Fig. 4, page 17, line 27 to page 18, line 8, page 21, line 11 to page 22, line 9) configured to store:

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<sup>1</sup> It is Appellants' understanding that, under the rules of Practice before the Board of Patent Appeals and Interference, 37 C.F.R. § 41.37(c) requires that a concise explanation of the subject matter recited in each independent claim be provided with reference to the specification by page and line numbers and to the drawings by reference characters. However, Appellants' compliance with such requirements anywhere in this document should in no way be interpreted as limiting the scope of the invention recited in all pending claims, but simply as non-limiting examples thereof.

<sup>2</sup> Specification, page 11, lines 2-5.

a plurality of error correction code blocks including the video object data (Figs. 1-3, page 23, line 23 to page 24, line 9, page 36, lines 12-25, page 58, lines 10-11), said video object data being configured to have at least one of video object units (Video Object DA 22 includes a video object unit (VOBU)), wherein a predetermined number of sectors form each error correction code block (Fig. 3 describes that an exemplary ECC block is 16 sectors, and page 24, lines 1-9), and each of said sectors has a predetermined size (Fig. 3 describes an example where 16 sectors = 32 kB); and

a control information recording area configured to store said control information (DA21 in Fig. 10, page 28, line 17 to page 32, line 2), the control information being configured to manage the video object data (page 28, lines 23-26) and including an AV file information table (DA210b in Fig. 30, page 103, lines 6-11) having a first area configured to store object stream information (page 103, lines 6-11, M\_VOB\_STI#1 to M\_VOB\_STI#n in Fig. 30 shown by DA2102-1 to DA2102-n), and a second area configured to store AV file information configured to describe information on the video object data (page 103, lines 6-11, DA2104 of Fig. 30, page 103, lines 14-23), the AV file information including a plurality of object information (DA21044-1 to DA21044-n of Fig. 30, page 103, lines 14-23), and a plurality of object information search pointers associated with the plurality of object information (DA21042-1 to DA21042-n of Fig. 30, page 103, lines 14-23), wherein:

an error correction code block address relates to the predetermined number of said sectors (page 59, lines 9-13, page 60, lines 9-17, page 95, lines 8-13, page 100, lines 1-9, page 101, lines 1-5),

each said object information includes time map information having time map general information, one or more time entries, and one or more video object unit entries (Figs. 30-31, page 103, line 24 to page 104, line 11),

each video object unit entry includes playback time information of a corresponding video object unit of the video object units, and size information of the corresponding video object unit (Fig. 31, page 104, lines 12-17), and

each of the time entries includes numeral information on the corresponding video object unit entry of the video object data (Fig. 33, page 104, lines 21-26, page 109, lines 1-16),

wherein the control information is provided to control recording, playing back, or editing the video object data by the information recording/reproducing apparatus, the video object data is accessed according to the control information (Figs. 4, 15, 27, and 28, Abstract, pages 7, line 23 to page 8, line 11, page 27, line 23 to page 28, line 4, page 28, line 17 to page 30, line 8).

Claim 15 recites,

An information recording method for recording information on an information storage medium including:

a data area configured to store (data recording area 28 in Fig. 1, data area DA in Fig. 4, page 17, line 27 to page 18, line 8, page 21, line 11 to page 22, line 9):

a plurality of error correction code blocks including the video object data (Figs. 1-3, page 23, line 23 to page 24, line 9, page 36, lines 12-25, page 58, lines 10-11), said video object data being configured to have at least one of video object units (Video Object DA 22 includes a video object unit (VOBU)), wherein a predetermined number of sectors form each error correction code block (Fig. 3 describes that an exemplary ECC block is 16 sectors, and page 24, lines 1-9), and each of said sectors has a predetermined size (Fig. 3 describes an example where 16 sectors = 32 kB); and

a control information recording area configured to store said control information (DA21 in Fig. 10, page 28, line 17 to page 32, line 2), the control information being

configured to manage the video object data (page 28, lines 23-26) and including an AV file information table (DA210b in Fig. 30, page 103, lines 6-11) having a first area configured to store object stream information (page 103, lines 6-11, M\_VOB\_STI#1 to M\_VOB\_STI#n in Fig. 30 shown by DA2102-1 to DA2102-n), and a second area configured to store AV file information configured to describe information on the video object data (page 103, lines 6-11, DA2104 of Fig. 30, page 103, lines 14-23), the AV file information including a plurality of object information (DA210444-1 to DA21044-n of Fig. 30, page 103, lines 14-23), and a plurality of object information search pointers associated with the plurality of object information (DA21042-1 to DA21042-n of Fig. 30, page 103, lines 14-23), wherein:

an error correction code block address relates to the predetermined number of said sectors (page 59, lines 9-13, page 60, lines 9-17, page 95, lines 8-13, page 100, lines 1-9, page 101, lines 1-5),

each said object information includes time map information having time map general information, one or more time entries, and one or more video object unit entries (Figs. 30-31, page 103, line 24 to page 104, line 11),

each video object unit entry includes playback time information of a corresponding video object unit of the video object units, and size information of the corresponding video object unit (Fig. 31, page 104, lines 12-17), and

each of the time entries includes numeral information on the corresponding video object unit entry of the video object data (Fig. 33, page 104, lines 21-26, page 109, lines 1-16),

the information recording method comprising:

recording the video object data into the data area (ST204B of Fig. 29, page 93, lines 3-13); and

recording the control information, including the plurality of object information, into the control information recording area (ST208 of Fig. 29, page 94, lines 18-26).

Claim 16 recites,

An information reproducing method for reproducing information recorded on an information storage medium that includes,

a data area including (data recording area 28 in Fig. 1, data area DA in Fig. 4, page 17, line 27 to page 18, line 8, page 21, line 11 to page 22, line 9):

a plurality of error correction code blocks including the video object data (Figs. 1-3, page 23, line 23 to page 24, line 9, page 36, lines 12-25, page 58, lines 10-11), said video object data being configured to have at least one of video object units (Video Object DA 22 includes a video object unit (VOBU)), wherein a predetermined number of sectors form each error correction code block (Fig. 3 describes that an exemplary ECC block is 16 sectors, and page 24, lines 1-9), and each of said sectors has a predetermined size (Fig. 3 describes an example where 16 sectors = 32 kB); and

a control information recording area configured to store said control information (DA21 in Fig. 10, page 28, line 17 to page 32, line 2), the control information being configured to manage the video object data (page 28, lines 23-26) and including an AV file information table (DA210b in Fig. 30, page 103, lines 6-11) having a first area configured to store object stream information (page 103, lines 6-11, M\_VOB\_STI#1 to M\_VOB\_STI#n in Fig. 30 shown by DA2102-1 to DA2102-n), and a second area configured to store AV file information configured to describe information on the video object data (page 103, lines 6-11, DA2104 of Fig. 30, page 103, lines 14-23), the AV file information including a plurality of object information (DA21044-1 to DA21044-n of Fig. 30, page 103, lines 14-23), and a plurality of object information search pointers associated with the plurality of object information (DA21042-1 to DA21042-n of Fig. 30, page 103, lines 14-23), wherein:

an error correction code block address relates to the predetermined number of said sectors (page 59, lines 9-13, page 60, lines 9-17, page 95, lines 8-13, page 100, lines 1-9, page 101, lines 1-5),

each said object information includes time map information having time map general information, one or more time entries, and one or more video object unit entries (Figs. 30-31, page 103, line 24 to page 104, line 11),

each video object unit entry includes playback time information of a corresponding video object unit of the video object units, and size information of the corresponding video object unit (Fig. 31, page 104, lines 12-17), and

each of the time entries includes numeral information on the corresponding video object unit entry of the video object data (Fig. 33, page 104, lines 21-26, page 109, lines 1-16),

the information reproducing method comprising:

reproducing the control information, including the plurality of object information, from the control information recording area (Fig. 15, page 29, lines 2-19); and

reproducing the video object data from the data area (Fig. 15, page 37, line 24 to page 38, line 4, page 62, line 11 to page 63, line 6).

Claim 17 recites,

An information reproducing apparatus for reproducing information recorded on an information storage medium that includes:

a data area including (data recording area 28 in Fig. 1, data area DA in Fig. 4, page 17, line 27 to page 18, line 8, page 21, line 11 to page 22, line 9):

a plurality of error correction code blocks including the video object data (Figs. 1-3, page 23, line 23 to page 24, line 9, page 36, lines 12-25, page 58, lines 10-11), said video object data being configured to have at least one of video object units (Video Object DA 22

includes a video object unit (VOBU)), wherein a predetermined number of sectors form each error correction code block (Fig. 3 describes that an exemplary ECC block is 16 sectors, and page 24, lines 1-9), and each of said sectors has a predetermined size (Fig. 3 describes an example where 16 sectors = 32 kB); and

a control information recording area configured to store said control information (DA21 in Fig. 10, page 28, line 17 to page 32, line 2), the control information being configured to manage the video object data (page 28, lines 23-26) and including an AV file information table (DA210b in Fig. 30, page 103, lines 6-11) having a first area configured to store object stream information (page 103, lines 6-11, M\_VOB\_STI#1 to M\_VOB\_STI#n in Fig. 30 shown by DA2102-1 to DA2102-n), and a second area configured to store AV file information configured to describe information on the video object data (page 103, lines 6-11, DA2104 of Fig. 30, page 103, lines 14-23), the AV file information including a plurality of object information (DA21044-1 to DA21044-n of Fig. 30, page 103, lines 14-23), and a plurality of object information search pointers associated with the plurality of object information (DA21042-1 to DA21042-n of Fig. 30, page 103, lines 14-23), wherein:

an error correction code block address relates to the predetermined number of said sectors (page 59, lines 9-13, page 60, lines 9-17, page 95, lines 8-13, page 100, lines 1-9, page 101, lines 1-5),

each said object information includes time map information having time map general information, one or more time entries, and one or more video object unit entries (Figs. 30-31, page 103, line 24 to page 104, line 11),

each video object unit entry includes playback time information of a corresponding video object unit of the video object units, and size information of the corresponding video object unit (Fig. 31, page 104, lines 12-17), and



each of the time entries includes numeral information on the corresponding video object unit entry of the video object data (Fig. 33, page 104, lines 21-26, page 109, lines 1-16),

the information reproducing apparatus comprising:

a first reproducer configured to reproduce the control information, including the plurality of object information, from the control information recording area (decoder 60 of Fig. 27, Fig. 15, page 76, lines 9-13, page 29, lines 2-19); and

a second reproducer configured to reproduce video object from the data area (decoder 60 of Fig. 27, Fig. 15, page 81, lines 8-22).

#### VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection being appealed are whether Claim 14 is directed to patentable subject matter as defined by 35 U.S.C. §101, and whether Claims 14-17 comply with the requirement of 35 U.S.C. §112, second paragraph.

#### VII. ARGUMENT

##### A. REJECTION OF CLAIM 14 UNDER 35 U.S.C. §101

##### Patentable Subject Matter as Defined by 35 U.S.C. §101 Includes Computer Readable Mediums Encoded With Data Structures

35 U.S.C. §101 states

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereon, may obtain a patent therefor, subject to the conditions and requirements of this title.

When interpreting this statute, the Supreme Court has established that the legislative history is relevant. In *Diamond v. Chacrabarty*, 447 U.S. 303 (1980), the Supreme Court

interpreted 35 U.S.C. §101 in light of the legislative history. The Supreme Court noted that Congress had intended patentable subject matter to "include anything under the sun that is made by man."

While this language from the legislative history does not appear in the statute, it shows the intent of Congress (which has already been appreciated by the Supreme Court<sup>3</sup>) that 35 U.S.C. §101 be interpreted broadly. Particularly, the legislative history shows that the words "any" in the statute denote that patentable subject matter should be viewed broadly.

However, 35 U.S.C. §101 is not without bounds. The Federal Circuit in *In re Lowry*<sup>4</sup> established that claims directed to a data structure are statutory subject matter when there is a functional relationship between the data structure and a storage medium. The court in *Lowry* recognized that a "data structure" is "a **physical** implementation of data model's organization of the data."<sup>5</sup>

Claim 1 in *Lowry*, which was found to be directed to patentable subject matter, recites

A memory for storing data for access by an application  
program being executed on a data processing system,  
comprising: a data structure stored in said memory....

The body of Lowry's Claim 1 describes a specific management relationship. Lowry's data structure stores information used by an application program being stored on a data processing system. The data structure includes a plurality of attribute data objects and their specific hierarchical and non-hierarchical relationships. Particularly, Lowry's Claim 1 describes a pyramidal arrangement of hierarchically arranged attribute data objects, having non-hierarchical relationships with other attribute data objects. The attribute data objects contain

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<sup>3</sup> See, *Diamond v Diehr*, 450 U.S. 175, 193 (1981) in addition to *Chacrabarty*.

<sup>4</sup> 32 F.3d 1579 (Fed. Cir. 1994).

<sup>5</sup> *Lowry*, at 1580 (emphasis added).

information used by the application program as well as information regarding its interrelationships with other attribute data objects.<sup>6</sup>

The Federal Circuit noted that

Lowry's [attribute data objects] ADOs do not represent merely underlying data in a database. ADOs contain both information used by application programs and information regarding their physical interrelationships with a memory. Lowry's claims dictate how application programs manage information. Thus, Lowry's claims define functional characteristics of the memory.<sup>7</sup>

Claim 14 is Directed Toward Patentable Subject Matter

Like the claims considered in *Lowry*, Applicants' Claim 14 is directed to an information storage medium configured to have data recorded thereon and data reproduced therefrom by an information recording/reproducing apparatus, the data including **control** information and video object data. Thus, Claim 14 and the claims in *Lowry* are both directed to a physical medium storing a data structure in which a specific management relationship is realized by a recording/reproducing apparatus (or data processing system in Lowry's Claim 14).

Particularly, Claim 14 describes a data area that stores error correction code blocks, control information, and expresses the relationship between these functional structures. For example, the error correction code blocks include the video object data, and the control information is configured to manage the video object data.

Claim 14 also recites "a control information recording area configured to store...a plurality of object information search pointers associated with the plurality of object information." The search pointers, for example, allow object information included in AV file information to be located. In other words, a recording/reproducing apparatus, in cooperation with the functional structures of the medium, accesses the control information of the medium

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<sup>6</sup> *Lowry*, at 1580, 1581, and 1584.

<sup>7</sup> *Lowry*, at 1583.

and employs the search pointers to precisely locate and playback video object data of interest. Thus, the **control information** recited in Claim 14 is functional descriptive material which pertains to the organization of complementary formatted information stored on the information storage medium.

Furthermore, the body of Claim 14 dictates how the information recording/reproducing apparatus manages information. Claim 14 further recites

wherein the **control** information is provided to control recording, playing back, or editing the video object data by the information recording/reproducing apparatus, the video object data is accessed **according to the control information**.

Thus, Claim 14 further shows the functional interrelationship between the data structure, the information storage medium, and the information recording/reproducing apparatus.

The Office Has Ignored the Federal Circuits Analysis in *Lowry*

The Final Rejection mailed January 25, 2007 justifies the rejection of Claim 14 under 35 U.S.C. §101 by stating

...the information do not provide any functional interrelationship to the medium for controlling the medium to reading [sic] and access the information from the medium, or impart to any software and hardware structural components to perform a function that is processed by computer, the information themselves can not [sic] make them statutory.

However, this conclusory statement provides no analysis by Office with respect to *Lowry*. Further, the Office has cited no alternative authority to support this naked assertion.

Claim 14 is directed toward a physical medium encoded with a data structure used by an information recording/reproducing apparatus. The data structure includes information regarding the functional interrelationships within the physical medium and dictates how the information recording/reproducing apparatus manage information.

Thus, Claim 14 satisfies the requirements set forth by the Federal Circuit in *Lowry*, and is therefore directed toward patentable subject matter.

Furthermore, Claim 14 is different than the claim considered in *In re Wamerdam*,<sup>8</sup> which included a claim directed toward a method for generating a data structure. Claim 14 is not directed toward a method of generating a data structure. Rather, Claim 14 is directed to an information storage medium, which emphasizes the physical nature of the data structure. Claim 14 is much closer to the claims at issue in *Lowry*, and should be considered to be directed to patentable subject matter based on the rationale put forward in *Lowry*.

Moreover, the Board of Appeals and Patent Interferences (“Board”) in *Ex parte Nuijten*<sup>9</sup> reversed the Examiner’s rejection under 35 U.S.C. §101 that a storage medium storing a signal is nonstatutory subject matter. Claim 15 of the 09/211,928 application recites

A storage medium having stored thereon a signal with embedded supplemental data, the signal being encoded win accordance with a given encoding process and selected samples of the signal representing the supplemental data, and at least one of the samples preceding the selected samples is different from the sample corresponding to the given encoding process.

The Board noted that Claim 15 is not trying to claim a signal, and that the storage medium puts Claim 15 into “the statutory category of ‘manufacture’ and that the signal is functional because it can be used by a machine to produce a useful result, as with the data structure stored in memory in *Lowry*.”<sup>10</sup>

Similar to Claim 15 in *Ex Parte Nuijten* (and the claim at issue in *Lowry* that was cited by the Board with approval) Claim 14 of the present application is directed toward an information storage medium that includes a data structure. The data structure is functional because it can be used by a machine to produce a useful result (i.e., the recording/reproducing apparatus recited in Claim 14).

#### B. REJECTION OF CLAIMS 14-17 UNDER 35 U.S.C. §112, SECOND PARAGRAPH

<sup>8</sup> 33 F.3d 1354 (Fed. Cir. 1994).

<sup>9</sup> Appeal Number 2003-0853

<sup>10</sup> *Id.*, at page 14.

The Office Has Failed to Properly Consider Functional Limitations

The Final Rejection mailed on January 25, 2006 rejects Claims 14, 16, and 17 under 35 U.S.C. §112, second paragraph, because “configured to store” is not positive recitation to point out that data have been recorded on the medium.<sup>11</sup>

However, “configured to” is a functional limitation that cannot be ignored. MPEP §2173.05(g) states “A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used.”

Furthermore, the present specification provides support for “configured to” in Figs. 1-5, which describe an example of the claimed data structure. For example, Applicants’ Fig. 4 explains the hierarchical structure of the data structure. Page 24, lines 22-23, of the specification states “Data area DA between lead-in and lead out areas 27 and 26 can record both data and AV data.” Thus, the present specification supports the claim recitation that the data are on the information recording medium is configured to store data.

The Office Cannot Require Applicants to Amend Otherwise Definite Claims to Improve Clarity or Precision under 35 U.S.C. §112, Second Paragraph

The outstanding Office Action also attempts to require Applicants to further amend Claims 16 and 17. Page 4 of Office Action mailed January 25, 2007 states “Claims 16 and 17, last line, after ‘data area’ should be inserted – based on the reproduced control information.” MPEP §2173.02 states “...if the language used by applicant satisfies the statutory requirements of 35 U.S.C. 112, second paragraph, but the examiner merely wants the applicant to improve the clarity or precision of the language used, the claim must not be rejected under 35 U.S.C. second paragraph...” (emphasis in original). Thus, the requirement to amend Claims 16 and 17 to include “based on the reproduced control information” is

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<sup>11</sup> Official Action, mailed January 25, 2007, pages 3-4.

improper. The Office has provided no evidence or reasoning to suggest that the “based on the reproduced control information” is an omitted essential element. The Office has provided no citations to the specification where Applicants define “based on the reproduced control information” to be an essential element.<sup>12</sup>

Therefore, Applicants respectfully submit that Claims 16 and 17 clearly describe and distinctly claim the subject matter regarded by Applicants as the invention.

Claim 15 is Not a Hybrid Claim

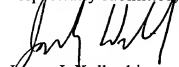
Claim 15 is rejected under 35 U.S.C. §112, second paragraph for being a hybrid claim. Claim 15 does not claim multiple statutory classes. Instead, a recording method is claimed with regard to a specific medium subject to the recording.

While MPEP §2173.05(p)(II) states that a single claim cannot claim both an apparatus and method steps of using the apparatus, there is no prohibition against a claim of one statutory class referring to subject matter in a different statutory class.

VIII. CONCLUSION

For the foregoing reasons, Applicants respectfully submit that Claim 14 complies with the requirements of 35 U.S.C. §101 and is directed toward statutory subject matter, and that Claims 14-17 comply with the requirements of 35 U.S.C. §112, second paragraph.

Respectfully submitted,

  
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<sup>12</sup> See, MPEP §2172.01.

CLAIMS APPENDIX

Claims 1-13 (Canceled)

Claim 14 (Rejected). An information storage medium configured to have data recorded thereon and data reproduced therefrom by an information recording/reproducing apparatus, said data including control information and video object data, the information storage medium comprising:

a data area configured to store:

a plurality of error correction code blocks including the video object data, said video object data being configured to have at least one of video object units, wherein a predetermined number of sectors form each error correction code block, and each of said sectors has a predetermined size; and

a control information recording area configured to store said control information, the control information being configured to manage the video object data and including an AV file information table having a first area configured to store object stream information, and a second area configured to store AV file information configured to describe information on the video object data, the AV file information including a plurality of object information, and a plurality of object information search pointers associated with the plurality of object information, wherein:

an error correction code block address relates to the predetermined number of said sectors,

each said object information includes time map information having time map general information, one or more time entries, and one or more video object unit entries,



each video object unit entry includes playback time information of a corresponding video object unit of the video object units, and size information of the corresponding video object unit, and

each of the time entries includes numeral information on the corresponding video object unit entry of the video object data,

wherein the control information is provided to control recording, playing back, or editing the video object data by the information recording/reproducing apparatus, the video object data is accessed according to the control information.

Claim 15 (Rejected): An information recording method for recording information on an information storage medium including:

a data area configured to store:

a plurality of error correction code blocks including the video object data, said video object data being configured to have at least one of video object units, wherein a predetermined number of sectors form each error correction code block, and each of said sectors has a predetermined size, and

a control information recording area configured to store control information for managing the video object data, the control information including an AV file information table having a first area configured to store object stream information, and a second area configured to store AV file information configured to describe information on the video object data, the AV file information including a plurality of object information, and a plurality of object information search pointers associated with the plurality of object information, wherein:

an error correction code block address relates to the predetermined number of said sectors,

each said object information includes time map information having time map general information, one or more time entries, and one or more video object unit entries,

each video object unit entry includes playback time information of a corresponding video object unit of the video object units, and size information of the corresponding video object unit, and

each of the time entries includes numeral information on the corresponding video object unit entry of the video object data,

the information recording method comprising:

recording the video object data into the data area; and

recording the control information, including the plurality of object information, into the control information recording area.

Claim 16 (Rejected): An information reproducing method for reproducing information recorded on an information storage medium that includes,

a data area including:

a plurality of error correction code blocks including the video object data, said video object data being configured to have at least one of video object units, wherein a predetermined number of sectors form each error correction code block, and each of said sectors has a predetermined size, and

a control information recording area including control information for managing the video object data, the control information including an AV file information table having a first area including object stream information, and a second area including AV file information configured to describe information on the video object data, the AV file information including a plurality of object information, and a plurality of object information search pointers associated with the plurality of object information, wherein:

an error correction code block address relates to the predetermined number of said sectors,

each said object information includes time map information having time map general information, one or more time entries, and one or more video object unit entries,

each video object unit entry includes playback time information of a corresponding video object unit of the video object units, and size information of the corresponding video object unit, and

each of the time entries includes numeral information on the corresponding video object unit entry of the video object data,

the information reproducing method comprising:

reproducing the control information, including the plurality of object information, from the control information recording area; and

reproducing the video object data from the data area.

Claim 17 (Rejected): An information reproducing apparatus for reproducing information recorded on an information storage medium that includes

a data area including:

a plurality of error correction code blocks including the video object data, said video object data being configured to have at least one of video object units, wherein a predetermined number of sectors form each error correction code block, and each of said sectors has a predetermined size, and

a control information recording area including control information for managing the video object data, the control information including an AV file information table having a first area including object stream information, and a second area including AV file information configured to describe information on the video object data, the AV file

information including a plurality of object information, and a plurality of object information search pointers associated with the plurality of object information, wherein:

an error correction code block address relates to the predetermined number of said sectors,

each said object information includes time map information having time map general information, one or more time entries, and one or more video object unit entries,

each video object unit entry includes playback time information of a corresponding video object unit of the video object units, and size information of the corresponding video object unit, and

each of the time entries includes numeral information on the corresponding video object unit entry of the video object data,

the information reproducing apparatus comprising:

a first reproducer configured to reproduce the control information, including the plurality of object information, from the control information recording area; and

a second reproducer configured to reproduce video object from the data area.

EVIDENCE APPENDIX

None

RELATED PROCEEDING APPENDIX

None